Uruachic Area Geology Report September 19, 2003

### TECHNICAL REPORT ON THE EL INDIO, PELONACHI AND DELTA 1 PROPERTIES

# URUACHIC GOLD DISTRICT

# STATE OF CHIHUAHUA - MEXICO

FOR

STINGRAY RESOURCES INC. 55 University Avenue, Suite 910 Toronto, Ontario M5J 2H7

BY

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**September 19, 2003** 

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### SUMMARY

At the request of Mr. Steve Brunelle, President of Stingray Resources Inc. ("Stingray"), a public Canadian company based in Toronto, Victor A. Jaramillo, P.Geo. was engaged to complete a due diligence geological field examination of three mineral exploration properties collectively called the Property in Mexico, followed by a technical report which complies with reporting regulations as set out in NI 43-101.

On September 19, 2003 Stingray signed a letter of intent with Minera Uruachic S.A. de C.V. to enter into an option agreement whereby Stingray can acquire a 75% interest in The El Indio (200 Ha), Pelonachi (1,016.5 Ha) and the Delta 1 (100.31 Ha) Exploration Concessions. These mining concessions are located within the Uruachic gold district approximately 250 kilometers southwest from the City of Chihuahua, State of Chihuahua, in Mexico. Access is via a paved highway from Chihuahua City, to a well maintained gravel roads and from there by horseback or hiking a short distance.

After the changes in Mexican mining laws in 1992 that allow 100% foreign ownership, a number of Canadian and American based companies have been successful in outlining large, open pittable, gold-silver mineral resources in the Sierra Madre Occidental Gold Belt

The Uruachic District lies in the middle and directly on the northwest trend of the Sierra Madre Occidental Gold Belt. Known gold deposits to just name a few include; Mulatos with 43.5 MT @ 1.58 g/t gold of proven and probable reserves reported by Placer Dome Inc's 1999 Feasibility Study update (source: www.alamosgold.com under Salamandra Property), Dolores with 77.5 MT @ 0.76 g/t gold and 1.43 oz/t silver of measured and indicated resources (source: www.minefinders.com/News/april5,2002.html), and El Sauzal with 20.5 MT @ 3.05 g/t gold of proven and probable reserves as of 12-31-2002 (source: www.glamis.com/properties/mexico/elsauzal.html).

At the **EL Indio Property** sampling has identified an area with strong epithermal signatures, such as, silicification, stockwork quartz veining, hydrothermal breccias, vuggy silica and chalcedonic quartz. This area is approximately 1.5 km long by 250 meters wide and hosts gold and silver in grab and chip samples. Anomalous values of silver, arsenic, lead, antimony and mercury are common. Two contiguous samples taken from an old trench in an area of narrow quartz veins averaged 2.67 g/t across 4 meters. Sampling to date has returned assays up to 10.46 g/t gold.

EL Indio has never been explored extensively using modern exploration techniques including using geophysical methods or drilling. The writer believes that potential exists for both a large tonnage, low to moderate grade, bulk mineable gold deposit and/or an underground high grade gold deposit.

The Pelonachi Property hosts several interesting geologic features such as, intrusive contacts with evidence of hydrothermal alteration; widespread quartz veinlets, alteration

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zones and tourmaline – rich breccias and stockwork zones with disseminated sulphides. Approximately one half of the Pelonachi concession is underlain by a granodioritic body which hosts a strongly altered zone of quartz-tourmaline-epidote-pyrite within a sparse network of quartz-hematite veinlets.

The hill in the central area of the property, known locally as Cerro Pelonachi, is a color anomaly with quartz-pyrite alteration that extends from the top of the hill to the bottom of creeks. Samples of tournaline-rich breccia from this area run as high as 2.52 g/t gold. At the Pelonachi Property widespread hydrothermal alteration was observed over an area of at least 1 by 1 kms, particularly strong limonitic staining. The writer believes that potential exists at Pelonachi for a large tonnage, low to moderate grade, bulk mineable gold deposit.

At the Delta-1 Property altered rhyolites are cut by numerous fractures which contain veinlets of quartz and epidote. This altered zone does not form a conspicuous gossan and is very low in sulphide content. Hematite is often found along the selvadges of fractures. Fine specks of native gold have been observed along fractures in outcrops. Native gold has also been observed in polished thin sections taken from surface samples within the Delta 1 altered zone. The size of this alteration zone is approximately 300 by 200 meters. The average gold from 142 surface samples collected within this zone by other workers was 4.32 g/t gol d. The writer believes that an excellent potential exists at Delta 1 for a large tonnage, low to moderate grade, bulk mineable gold deposit.

V. Jaramillo recommends that a significant exploration program be conducted over the Properties. It would consist of an initial First Phase Exploration program that would include geological mapping and sampling, MMI geochemistry, trenching, and access road construction for a follow up drill program. This program is estimated to cost \$ US 161,200 and take three months to complete.

A Second Phase Exploration program will depend on successful first phase results. This Second Phase program is expected to consist primarily of drilling gold and silver targets outlined by an IP/resistivity geophysical survey (test lines initially to determine effectiveness) and the results of the First Phase program. The cost of the Second Phase Program is estimated at \$ US 2,550,460 and take approximately 6 months to complete.

# **1.0 INTRODUCTION**

### **1.1 GENERAL**

At the request of Mr. Steve Brunelle, President of Stingray Resources Inc. ("Stingray"), a public Canadian company based in Toronto, Victor A. Jaramillo, P.Geo. was engaged to complete a due diligence geological field examination of three mineral exploration properties collectively called the Property in Mexico, followed by a technical report which complies with reporting regulations as set out in NI 43-101. The **'EL Indio' Concession or Property** (Title 205852) covers 200 hectares, the **Pelonachi Property** covers approximately 1,016.5 hectares and is comprised of the "Pelonachi" Concession (Title 206348) which covers 396.58 hectares and the "Pelonachi II" Concession (Title 205811) which covers 619.93 hectares, , and the **Delta 1 Property** covers approximately 100.31 hectares and is comprised of the "Delta 1" Concession (Title 215571) which covers 80.31 hectares and the "Escondida" Concession (Title 203901) which covers an area of 20 hectares. The mineral titles of these three properties, and their respective mineral concessions, are held by Minera Uruachic S.A. de C.V. of Mexico ("Minera Uruachic"). All Exploration Concessions appear to be in good standing with respect to government registration and taxes as per documentation provided by Minera Uruachic although this does not constitute a legal opinion.

Stingray Resources has signed a letter agreement with Minera Uruachic S.A. de C.V. ("Minera Uruachic") and has entered into an option agreement whereby Stingray can acquire a 75% interest in the Property.

The Property in general is located within the Uruachic gold district approximately 250 kilometers southwest from the City of Chihuahua, State of Chihuahua, Mexico. Access to the property is reached via a paved highway from Chihuahua City, to a well maintained gravel roads and from there by horseback or hiking a short distance (See Figure 1 below).

Victor Jaramillo, P.Geo



### **1.2 TERMS OF REFERENCE**

Victor A. Jaramillo, P.Geo. was retained by Stingray on August 31, 2003 with the terms of reference for this assignment consisting of a due diligence geological field examination of three exploration properties in Chihuahua, Mexico, followed by a detailed technical report which

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complies with reporting regulations as set out in NI 43-101. It is the author's understanding that this report will be used by Stingray to apply for reinstatement of its listing on the TSX-Venture Exchange, and for raising financing for future exploration at the Property.

Victor A. Jaramillo, P.Geo. provides geological consulting services to the international mining industry, holds a B.Sc. Degree in Geology and an M.Sc.A. Degree in Mineral Exploration. Mr. Jaramillo has over 20 years of professional experience, and has previously held positions as Project Manager, Exploration Manager and Chief Geologist for several North American Mining Companies. He is a member in good standing of The Association of Professional Engineers and Geoscientists of British Columbia, and a Fellow of the Geological Association of Canada. Mr. Jaramillo is not an insider, associate or affiliate of Stingray.

# **1.3 SCOPE, SOURCES OF INFORMATION AND DISCLAIMER**

In preparing this report, V. Jaramillo relied in part on geological reports and maps, miscellaneous technical papers, published government reports and historical documents listed in the "Selected References" section at the Conclusion of this report, public information and the writer's experience. In addition, between September 2 and 6, 2003 the author of this report was on site at the property and completed preliminary geological field work and investigations. Moreover, visits were made to Minera Uruachic's Chihuahua office prior to and after the site visits, during which time background information concerning the properties was made available.

V. Jaramillo has only reviewed the land tenure in a preliminary fashion and has not independently verified the legal status or ownership of the properties or the underlying Letter of Intent.

The results and opinions expressed in this report are based on V. Jaramillo's field observations and the geological data listed in the "Sources of Information".

The results and opinions expressed in this report are conditional upon the aforementioned geological and legal information being current, accurate, and complete as of the date of this report, and that no information has been withheld which would affect the conclusions made herein. V. Jaramillo reserves the right, but will not be obliged, to revise the report and conclusions if additional information becomes known subsequent to the date of this report. While it is believed that the information, conclusions, and recommendations are reliable, under the conditions and subject to the limitations set forth, V. Jaramillo cannot guarantee their accuracy. V. Jaramillo does not assume responsibility for Stingray's actions in distributing this report.

# **1.4 UNITS AND CURRENCY**

All measurement units used in this report are metric and currency is in US dollars unless stated otherwise. The currency used in Mexico is the Peso. The exchange rate as of September 12, 2003 is \$ US 1.00 is equal to approximately 10.97 Pesos.

# 2.0 GENERAL DESCRIPTION

# 2.1 PROPERTY DESCRIPTION AND CURRENT STATUS

Stingray's Property consists of the "**EL Indio**" **Concession or Property** (Title 205852) which covers 200 hectares, the **The Pelonachi Property** which covers approximately 1,016.5 hectares and is comprised of the "Pelonachi" Concession (Title 206348) which covers 396.58 hectares and the "Pelonachi II" Concession (Title 205811) which covers 619.93 hectares, and the **Delta 1 Property** which covers approximately 100.31 hectares and is comprised of the "Delta 1" Concession (Title 215571) which covers 80.31 hectares and the "Escondida" Concession (Title 203901) which covers an area of 20 hectares. The mineral titles of these three properties, and their respective mineral concessions, are held by Minera Uruachic S.A. de C.V. of Mexico.

On September 19, 2003 Stingray signed a letter of intent with Minera Uruachic to enter into an option agreement whereby Stingray can acquire a 75% interest in the three properties. The terms of the agreement call for Stingray to complete due diligence which would include property visit(s) and legal assurances, after which time, they would enter into a formal option agreement. The option has a duration of 7 years with the following schedule (See Table 1):

Timing	Cash Payment (\$US)	Stingray Shares	Work Program (\$US)
Upon Signing	25,000	12,500	
First year anniversary	25,000	12,500	100,000
Second year anniversary	50,000	25,000	100,000
Third year anniversary	50,000	25,000	100,000
Fourth year anniversary	75,000	37,500	150,000
Fifth year anniversary	75,000	37,500	150,000
Sixth year anniversary	100,000	50,000	200,000
Seventh year anniversary	100,000	50,000	200,000
TOTALS	\$ 500,000	250,000	\$1,000,000

### Table 1: Cash, Share Option Payments and Work Program Commitment

All exploration expenditures and cash payments can be accelerated at the discretion of Stingray and are not restricted to the year they are incurred. The Agreement is subject to due diligence and regulatory approval.

As far as V. Jaramillo is aware, there are no pending environmental liabilities associated with the properties and Stingray will be obliged to comply with Mexico's environmental laws and the environmental permitting process as the projects advance.

Surface rights to the property area are mostly held by local farmers and negotiations would have to be done with them to gain access rights (building roads, drill pads, trenches, etc).

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### 2.2 LOCATION, ACCESS, AND INFRASTRUCTURE

The El Indio, Pelonachi, and Delta 1 Properties are located within the district of Uruachic, approximately 16 km from the town of Uruachic, which lies within the Sierra Madre Occidental mountain range in the western part of the state of Chihuahua, Mexico. (see Figure 1).

### Table 2.1 : Access Route to the El Indio Property

Destination	Distance (km)	Driving/walking	Road Conditions	
		Time		
Chihuahua- Basaseachic Falls	250	4 hours	Paved highway	
Basaseachic Falls- Gosogachic	80	3 hour	Good gravel	
Gosogachic – El Indio	1.5	1.0 hours	Horse trail	

#### Table 2.2 : Access Route to the Pelonachi Property

Destination	Distance (km)	Driving/walking	Road Conditions
		Time	
Chihuahua - Basaseachic Falls	250	4 hours	Paved highway
Basaseachic Falls- Gosogachic	80	3 hour	Good gravel
Gosogachic - road going north	3	20 minutes	Good gravel
North road- Pelonachi Property	3	1.5 hours	Horse trail

### Table 2.3 : Access Route to the Delta-1 Property

Destination	Distance (km)	Driving/walking Time	Road Conditions
Chihuahua- Basaseachic Falls	250	4 hours	Paved highway
Basaseachic Falls- Gosogachic	80	3 hour	Good gravel
Gosogachic - north of property	8	45 minutes	Rough gravel
North area - Delta-1 Property	2.5	1.5 hours	Steep mule trail

(Information on the above tables was provided by Daniel Nofrietta, personal communication).

The Uruachic District lies directly on the northwest trend of major known precious metal deposits which include; Mulatos (Placer Dome), Dolores (Minefinders Corporation), Ocampo (Gammon Lake Resources), Monterde (Kimber Resources), Alamo Dorado (Pan American Silver) and El Sauzal (Glamis Gold). As reference see Figure 4.

The town of Uruachic was founded in 1736, but mining activity predated that period. An old mill on the Nueva Union Property, 2.5 kilometers northeast of Uruachic, was fed with ore from a number of mines in the area. The most important mines were Nueva Union, San Timoteo, Los Animas, Los Alisos and Las Bolas. These mines all have large underground workings (Sorbara, Paul, June 1999).

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The town of Uruachic has several thousand inhabitants with police, a medical clinic, schools, satellite and public telephone communication. Electricity (110 Volts) for the town is presently supplied throughout the day. There are several small grocery stores and one substantial food store, with sufficient stock to supply an exploration program. As for fuel there are several small stores that sell unleaded gasoline, diesel fuel and propane gas. One guest house/hotel with 12 rooms is presently operating. This facility can supply meals on request. There are also a number of houses for rent in the town, some with relatively modern appliances. There is an internet café that is open from 9 am till 8 pm on weekdays.

The majority of the local inhabitants are farmers, though the town was originally built to service the mines in the district, and local people are aware of their mining heritage. Manpower is available but mostly untrained.



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Plate 1: View of the town of Uruachic looking south.

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Plate 2: View near the town of Uruachic showing the upper volcanic unit, and below the older volcanics, which host most of the gold mineralization in the area. This lower volcanic unit typically has color anomalies

### 2.3 GEOGRAPHY AND CLIMATE

The Sierra Madre Occidental is a mountain range approximately 1,500 km long and 250 km wide. It is located within the States of Chihuahua, Sonora and Durango in northwestern Mexico. Elevations in the Uruachic area range from approximately 1,000 to 2,000 meters above sea level.

There are two main winter and summer seasonal climate changes. In winter, from October to February, the climate is colder. At high elevations, snow and ice are common for short periods of time. During this time temperatures can some nights drop below zero degrees Celsius. At lower elevations, some rain may occur during the winter season. In summer, from June to September is the rainy season. At this time of the year, in some years (El Niño) roads can be washed out and creeks and rivers become difficult to cross for a few days at a time.

Vegetation in the Serra Madre Occidental changes depending on elevation and local climate. Most of the higher elevations are covered by pine and oak trees. At lower elevations plants are mainly of desert type. Local crops are mainly corn, beans and oats. Apple and peach trees are common close to settlements.

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### 3.0 MEXICO

### 3.1 INTRODUCTION

Mexico is located in the southern region of the North American Continent. It is bound by the United States of America to the north, the Gulf of California to the northwest, the Pacific Ocean to the west and southwest, Guatemala and Belize to the south as well as the Gulf of Mexico to the east. It covers an area of 1,972,550 square kilometers (See Figure 3).

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Before the arrival of the Spanish in the early 16th century., great indigenous civilizations (the Aztec, Maya, Toltec, Mixtec, Zapotec, and Olmec) flourished in Mexico. Arriving in 1519, Hernan Cortes overthrew the Aztec empire (1521) and captured its ruler, Montezuma. The territory became the vicerovalty of New Spain in 1535. Spanish conquerors exploited the mineral wealth of this land, using as laborers the native population and a growing mestizo class; at the same time they extended Spanish rule to the remainder of Mexico and to what is now the SW U.S. A rebellion led (1810-15) by Miguel Hidalgo y Costilla failed, but in 1821 Spain accepted Mexican independence, and an empire, headed by Augustin de Iturbide, was established in 1822. In 1823 army officers overthrew the empire and established a federal republic. The early years were marked by turmoil and corruption. Texas broke free of Mexican rule in 1836, and in the ensuing Mexican War (1846-48) with the U.S., Mexico lost much territory. Internally, the republic was torn by strife among contending political leaders, and in 1855 a demo cratic reform movement, led by Benito Juarez, overthrew the dictatorship of Antonio Lopez de Santa Ana and drafted a liberal constitution. Civil war followed, and in 1864 Napoleon III of France, who had colonial ambitions, established another ill-starred Mexican empire, under the Hapsburg prince Maximilian; it collapsed in 1867, and Maximilian was killed.

Then followed the dictatorship of Porfirio Diaz, who ruled Mexico for most of the 35 years after 1876. Diaz promoted economic growth and provided a degree of stability, but his encouragement of the concentration of wealth in the hands of a few spawned a new generation of revolutionaries. Among these were Emiliano Zapata, Francisco Pancho Villa (whose raid into the U.S. in 1916 resulted in a brief retaliatory U.S. invasion of Mexico), and Francisco I. Madero, who toppled Diaz in 1911 but was himself overthrown and murdered in 1913. A foundation for reform was laid by Venustiano Carranza's constitution of 1917. In 1929 Plutarco Elias Calles founded the Natio nal Revolutionary party (renamed the Institutional Revolutionary Party, or PRI, in 1946), which became the dominant political party in 20th-century Mexico. In 1982, following a drop in world oil prices, the faltering economy caused the government to devalue the peso and nationalize the banks; the country's enormous foreign debt hampered economic growth.

By the early 1990s, however, debt relief, diversification, foreign investment, and privatization of many industries long owned by the Mexican government had begun to produce an economic upturn. In 1988 Carlos Salinas de Gortari was elected president and opened Mexico to foreign investment, signing the North American Free Trade Agreement with the U.S. and Canada. In 2000 the PRI candidate, Francisco Labastida Ochoa, lost to the National Action party candidate, Vicente Fox Quesada, a historic opposition victory that ended more than 70 years of PRI rule.

### **3.2 GEOGRAPHY AND INFRASTRUCTURE**

Approximately 66% of Mexican territory is mountainous and the terrain rises steeply from the Pacific Ocean and Gulf of Mexico coastal plains to a central plateau which is bound by the Sierra Madre Occidental to the west and the Sierra Madre Oriental to the east. In the north the Sonoran Desert covers most of the region which les west of the Sierra Madre Occidental. The Central Meseta in the northern plateau region contains three great desert basins, called Bolsons. Central Mexico consists of rolling hills interspersed by broad basins and valleys. South of the plateau the Sierra Madre de Chiapas extends to the Guatemalan border. In the southeast limestone lowlands or broad plains of the Yucatan Peninsula reach the Gulf of Mexico. There are a few large rivers and a number of smaller ones and the country's largest lake is Lake Chapala. Major Cities (pop. est.); Mexico City 9,815,800, Guadalajara 1,650,000, Ciudad Netzahualcoyotl 1,255,500, Monterrey 1,069,000, Puebla 1,007,200, Leon 872,500, Juarez 789,300, Tijuana 698,800 (1990). Land Use; forested 26%, pastures 39%, agricultural-cultivated 13%, other 23% (Altapedia Online, countries, Mexico 1993).

Mexico has a free market economy with a mixture of modern and outmoded industry and agriculture, increasingly dominated by the private sector. Recent administrations have expanded competition in seaports, railroads, telecommunications, electricity, natural gas distribution, and airports. Income distribution remains highly unequal. Trade with the US and Canada has tripled since the implementation of NAFTA in 1994. Following 6.9% growth in 2000, real GDP fell 0.3% in 2001, recovering to only a plus 1% in 2002, with the US slowdown the principal cause. Mexico implemented free trade agreements with Guatemala, Honduras, El Salvador, and the European Free Trade Area in 2001, putting more than 90% of trade under free trade agreements. Foreign direct investment reached \$25 billion in 2001, of which \$12.5 billion came from the purchase of Mexico's second-largest bank, Banamex, by Citigroup.

Mexico's infrastructure consists of railways which total 19,510 km, highways *total* 323,977 km, waterways 2,900 km, crude oil pipelines 28,200 km, Ports and harbors include Acapulco, Altamira, Coatzacoalcos, Ensenada, Guaymas, La Paz, Lazaro Cardenas, Manzanillo, Mazatlan, Progreso, Salina Cruz, Tampico, Topolobampo, Tuxpan, and Veracruz.



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Figure 3 : Map of Mexico

Merchant marine includes 47 ships, airports 1,823 (2002) and electricity production 198.6 billion kWh, telephone lines 12.3 million (Source: CIA World Fact Book – Mexico 2003).

# 3.3 DEMOGRAPHY AND GOVERNMENT

Mexico has a population of 104,907,991 (July 2003 est.) inhabitants. About 70% of the people live in urban areas. Mexico city has a population of approximately 20 million.

The principal ethnic majority are the Mestizos who account for around 55% of the population and are of mixed AmerIndian and European (Spanish) descent. The AmerIndians account for 29% of the population while 15% of the population is divided among the Whites and a small number of Black Africans. Other ethnic minorities include Mulattoes, who are of mixed Black and Spanish descent, and the Chinese. The official language is Spanish which is spoken by the majority of the population while 7% of the population speak various AmerIndian languages only.

The government is a representative, democratic and federal republic, in accordance with its Political Constitution of 1917. Power Branches include :

Executive: President, chief of state and head of government, elected each 6 years.

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Legislative: Bicameral, house of deputies (500) and the Senate (80). Judicial: Supreme Court, local and federal systems.

Principal Government Official is Vicente Fox Quesada, President of Mexico

The country consists of 31 States a a Federal District. Political parties include:

Green Ecological Party (PVEM), Institutional Revolutionary Party (PRI) Labor Party (PT) National Action Party (PAN) Party of the Democratic Revolution (PRD) Convergence Party (CP)

# 3.4 BUSINESS INVESTMENT CLIMATE IN MEXICO

In December of 1993, the government passed a foreign investment law that replaced a restrictive 1973 statute. The law is consistent with the foreign investment chapter of the NAFTA and opened more areas of the economy to foreign ownership. It also provided national treatment for most foreign investment, eliminated all performance requirements for foreign investment projects, and liberalized criteria for automatic approval of foreign investment proposals. NAFTA investors receive both national and Most Favored Nation (MFN) treatment in setting up operations or acquiring firms, except where reservations have been specifically made for certain types of industries. States, provinces, and local governments must accord national treatment to investors from any of the NAFTA countries. Unfortunately, there have been a few investments blocked by local and state authorities where national treatment was not granted or where the investments have been under dispute.

#### **Conversion and Transfer Policies**

Mexico's economy is open in this regard, due to the requirements of its membership in the NAFTA and its accession to the OECD. In general, capital and investment transactions, remittance of profits, dividends, royalties, technical service fees, and travel expenses are handled at the market-determined exchange rate.

### **Expropriation and Compensation**

Under the NAFTA, Mexico may not expropriate property, except for a public purpose on a nondiscriminatory basis. Expropriations are governed by international law, and require rapid, fair market value compensation, including accrued interest. Investors have the right to international arbitration for violations of this or any other rights included in the investment chapter of the NAFTA. A NAFTA investor may choose either to seek monetary compensation through binding international arbitration or to use the registering country's court system.

#### **Right to Private Ownership and Establishment**

Most foreign investors operate in Mexico through corporations (Sociedades Anonimas de Capital Variable). Foreign-owned corporations are subject to the same laws as local companies and any special regulations governing foreign investment. A Mexican corporation must have at least five shareholders and, except in certain sensitive sectors, can usually be established within 1 -2 months. Costs of incorporation vary depending on the structure of the company but the average cost is USD 6,000. Upon registration with the Ministry of Foreign Relations (SRE), Mexican companies with foreign participation will be allowed to own land in restricted border (within 100 kilometers) and seacoast (within 50 kilometers) areas for non-residential purposes.

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### **Capital Outflow Policy**

There are no restrictions on capital and investment transactions, which are handled at a marketdetermined exchange rate (Source: US Department of Commerce, 1998).

### Mining & Exploration in Mexico

-Mexico is the 8th best place to mine in the world according to the 2003 Fraser Institute Survey.

-Mining is an integral and significant part of country's economy. It has World Class gold projects.

-Mexico encourages mining initiatives, incentives, services & information. It has; favourable mining legislation, direct foreign investment with 100% ownership, fifty year renewable terms for exploitation concessions, no limitation for concession surface areas and efficient permit processing. Over 76 mining companies are exploring in Mexico.

# 3.5 GOLD PRODUCTION IN MEXICO

Mexico's mine production of gold in 2001 was 23,543 kg, which was a 10.7% decrease with that of 2,000. Peñoles was the largest producer of gold with an output of about 10,800 kilograms. La Herradura, which was a mine operated by Minera Pendmont S. de RL, de C.V. (a joint-venture company of Peñoles (56%) and Newmont Mining Corporation (44%) in the State of Sonora was Mexico's largest gold mine with an output of almost 7,000 kg. Production from the open pit La Herradura began in 1998 and contributed to 36% of Peñoles total output, or 3,900 kg in 2001. At La Herradura , a third leaching pad was under construction during the year, which was expected to be completed by the first quarter of 2002; the goal was to increase production by about 20%.

La Cienaga in the State of Durango was Peñoles second largest gold producer with 32% of the company's production.

In 2001, Minera Hecla S.A. de C.V. began production from its San Sebastian silver and gold mine in the State of Durango. Silver and gold production from San Sebastian was 29,548 kg and 497 kg, respectively (US Geological Survey Mineral Yearbook – 2001)..





**FIGURE 4 :** Location of Gold Properties near Uruachic in the Sierra Madre Occidental Belt. (See list below)



# 4.0 HISTORICAL OVERVIEW

The town of Uruachi was founded in 1720 as El Real y Minas de Santa Rosa de Uruachi. The main mining activity in the Uruachi area was conducted in mines: San Martin (same as Las Trojas), San Jose (same as Alacran and Polo Norte), Las Animas, San Timoteo, Santa Rosa, Santa Margarita, Las Bolas, and Los Hilos.

From the beginning to the middle of the twentieth century, small miners returned to old underground workings. They opened collapsed tunnels, ventilated them, drained water from the flooded shafts, and made the best effort to find forgotten ore shoots and mine them. Some of this mining activity was productive, and ore was recovered (Alcaparra/Polo Norte), but some of these attempts did not find more ore and had to abandon old mining workings (San Timoteo). Since the mid-twentieth century, there has been very little modern exploration carried out in the Uruachi area. Exploration activity carried out by companies such as Golden Goliath, Minera Delta, Peñoles and Minera Uruachic were among the first major efforts to evaluate selected parts of the Uruachi camp.

### 4.1 HISTORY OF THE EL INDIO, PELONACHI AND DELTA 1 PROPERTIES

**a.** The El Indio Property and concession (Title 205852) covers 200 hectares. It was originally staked by Mr. Crispin Razcon and transferred later to Minera Delta in 1996. Mr. Daniel Nofrietta a Mexican geologist did preliminary field work in this property. A total of 12 chip samples returned gold values of up to 10.46 g/t gold. During 1999 International Northair Mines Ltd. collected a total of 318 chip samples mainly from approximately 3 x 3 meter panels. Gold assay results were as high as 6.3 g/t gold. Reports of the mineralogical environment indicate the recognition of a precious metal bearing epithermal system characterized by elevated As and Hg and geological textures typifying the deposits of the Sierra Madre trend.

**b.** The Pelonachi Property is located in the western part of the State of Chihuahua, Mexico, within the Uruachic District. The Property covers approximately 1,016.5 hectares and is comprised of the "Pelonachi" Concession (Title 206348) which covers 396.58 hectares and the "Pelonachi II" Concession (Title 205811) which covers 619.93 hectares. Preliminary field work was initially done by Carlos Jurado, a Mexican geologist, during August 1996 and on a second trip in October 1996. This work was done at the request of Minera Delta S.A. de C.V. and included regional and some detailed geological mapping. The Pelonachi Property has according to the local people a history of small scale mining dating back several years. Apparently, gold and silver were mined from veins with abundant stibnite and arsenopyrite in southern section of the property. Sampling from breccias gave up to 2.5 g/t gold.

**c.** The Delta 1 Property covers approximately 100.31 hectares and is comprised of the "Delta 1" Concession (Title 215571) which covers 80.31 hectares and the "Escondida" Concession (Title 203901) which covers an area of 20 hectares. The mineral concessions which make up the property were acquired by Minera Delta S.A. de C.V., a private Mexican company. In 1992 Minera Delta performed preliminary geological mapping and rock sampling, and in 1993 the property was optioned to Levelland Energy and Resources Ltd.. Exploration by Levelland on the Delta 1 Property consisted of geological mapping and rock chip sampling on a grid. Assays from the rock chip sampling outlined an area of approximately 200 by 300 meters with strongly anomalous gold and silver values in silicified and quartz veined rhyolites.

Due diligence sampling, within the Delta 1 grid, by Bethlehem Resources Corporation in December 1993 and March 1994 returned similar gold and silver values to those obtained by the Levelland grid sampling. Bethlehem subsequently entered into a joint venture agreement with Levelland and Minera Delta for the purpose of exploring this property.

In August 1994 a diamond drill program was undertaken by Bethlehem Resources Corporation in order to test for continuity of gold mineralization beneath the area of anomalous surface samples on the Delta 1 Property. Four drill holes totaling 662.8 meters were completed. The results were disappointing. In February 1995, Repadre Capital Corp ("Repadre") had the property re-examined by Reinhard von Guttenberg of Strathcona Mineral Services Limited. He recommended trenching and sawcut channel sampling. This program was completed in July, after Bethlehem assigned its agreement with Levelland and Minera Delta to Repadre.

During the late summer of 2003 and overlapping with the work completed by the author, geologists, Steven Brunelle of Toronto, Ontario, Hector Cordova of Hermosillo, Mexico and Daniel Nofrietta of Chihuahua, Mexico, all visited the properties and conducted field investigations which included topographic surveying and reconnaissance geologic mapping of the Property on behalf of Stingray. Mr. Brunelle visited the Property from August 14<sup>th</sup> to the 22<sup>nd</sup> and conducted a program of surface grab, panel chip and channel sampling of the identified precious metal mineralization at the Property, as identified by earlier geological mapping completed over several weeks by Daniel Nofrietta. Hector Cordova visited the Property during August and September and prepared the topographic base maps and the geological maps that have been reviewed by the author and incorporated in this report. Mr. Cordova conducted an extensive review of the regional and Property geology in his office in Hermosillo, Sonora and in the City of Chihuahua for Stingray. Mr. Cordova also took due diligence samples (grabs and chips) from the Property and assisted the author with his field examination of the Property. Forty-Nine (49) samples were taken by/or under the direct supervision of Messers Brunelle and Cordova from their earlier visits to the Property, and these were analyzed for precious metals at ALS CHEMEX as per the methods described in this report. These earlier analytical results have been reviewed and corroborate the author's findings and can be found in Appendix IV. Stingray has demonstrated to the satisfaction of the author that they have expended in excess of \$ 50,000 dollars (Canadian funds) in exploration work at the Property in the current year.

### **5.0 GEOLOGICAL SETTING**

The described area is located in the Sierra Madre Occidental. It is limited to the east by the Uplands with Basin and Range provinces and to the west is bounded by the Buried Range Province. This report covers the geology surrounding the town of Uruachi. To the south, the study area is bounded by the Oteros River, to the east by the town of Uruachic, to the north by the village of Arocoyvo, and to the west by the village of Yesuyvo.

The described area is overlain by the Lower (Inferior) and Upper (Superior) Volcanic Group of rocks emplaced on Mesozoic basement rocks which are conformably older rock units. The Upper Volcanic Group created regional plateaus and mountain building events with deep incised valleys exposing older rocks of the Lower Volcanic sequence.

# 5.1 REGIONAL GEOLOGY AND MINERAL DEPOSITS

The Uruachic District is located in the Sierra Madre Occidental, a north-west trending belt of Tertiary acid volcanic rocks. Aerially these rocks extend 1,250 kilometres north-south by 250 kilometers east-west, located in north western Mexico (See Figure 5). The Sonora Basin and Range Province, mainly composed of granodiorite and quartz monzonite intrusions bound the Sierra Madre Occidental to the west. East of the Sierra Madre Occidental is the Central Mexican Carbonate Platform, which hosts many famous silver-zinc-lead deposits, such as Santa Eulalia and Naica.

The Sierra Madre Occidental is a broad anticline with three main stratigraphic units. An Upper Cretaceous to Lower Tertiary andesite to rhyolite sub-aerial and submarine package, which

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includes sub-volcanic intrusives, unconformably overlies a basement of Jurassic marine sediments. This unit, called the Lower Volcanic Sequence, is approximately 1,000 meters thick and contains most of the known mineralization of interest. The Lower Volcanic Sequence is, in turn, unconformably overlain by an approximately 400 meter thick Mid-Tertiary rhyolite to dacite ignimbrite, the Upper Volcanic Sequence.

Calderas formed during the emplacement of the Upper Volcanic Sequence are associated spatially with gold mineralization in the Lower Volcanic Sequence. Calderas are located on regional northwest trending dextral faults, generally at their junction with less prominent northeast trending conjugate faults. Mineralization (gold and silver) of interest has generally been found in the Lower Volcanic Sequence. Epithermal precious metal deposits are found mainly in this Lower Volcanic Sequence which is thought to have been a better host rock due to their higher porosity and fracturing. Meteoric fluids flowed more freely in the Lower Volcanics which are thought to be less restrictive in nature compared to the typically welded tuffs of the Upper Volcanics. Although many geologist feel that calderas are an essentially important ingredient for gold deposition this may just be a function of their proximal relationship topographically to Lower Volcanics although admittedly, these could well serve as the heat pumps for fluid flow and migration of gold and silver.

Mineralization (gold and silver) reported in the Upper Volcanic Sequence consists primarily of narrow veins. The Upper Volcanic Sequence is generally a more homogenous and compact ash tuff with less welded rhyolite tuff or ignimbrite. The general geological setting is similar to some volcanic hosted disseminated gold deposits in the United States, such as Round Mountain in south eastern Nevada. If areas of coarser pyroclastic volcanic rocks of the Upper Volcanic Sequence can be outlined, larger bodies of disseminated gold mineralization might be found. The Upper Volcanic Sequence is capped by minor mafic lava flows which could act as impermeable rocks for pooling and ponding of hydrothermal solutions that are associated with epithermal systems hosting gold and silver. Preliminary field investigations on the Stingray property have observed alteration and mineralization including gold and silver found in the Lower Volcanic sequence that fit the epithermal model for the Sierra Madres nicely.

Historically, this gold and silver mineralized metallogenic belt has been known for its high grade precious metals vein deposits, with silver being the most important commodity. These veins were mined as an economic function of metallurgical processes for extraction of gold and silver which required high grades since economic recoveries of lower grade ores was not feasible. The Batopilas District, located 109 kilometers southeast of Uruachic, has produced over 9,300 tonnes of silver alone.

More recently, starting after the changes in Mexican mining laws in 1992 that allow 100% foreign ownership, a number of Canadian and American based companies have been successful in outlining large, open pittable, gold-silver mineral resources (Figure 4). These precious metal deposits occur all along the length of the Sierra Madre Occidental, in a marked northwest-southeast trend, and are often related to volcanic calderas, which are common throughout the belt (Swanson & McDowell, 1984). The highly mineralized (gold and silver) nature of the Lower Volcanic Sequence is readily evident when one examines a regional geology and topography map of the Sierra Madre Occidental. The majority of the region is covered on surface by the

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Upper Volcanic Sequence and shows only a modest number of mineral occurrences and mines. However, wherever a river valley has incised through the rhyolites and exposed the Lower Andesitic Volcanic Sequence, a very high concentration of mineral deposits and occurrences is found. This is further enhanced by the fact that the Sierra Madre Occidental is generally characterized by mountainous topography with few roads and limited access, and has therefore been explored much less than other, easily accessible, areas within this belt (See Map 5 of Regional Geology).

Examples of some large precious metal deposits in the Sierra Madre Occidental that have been mined for many years by large Mexican mining companies include:

Tayoltita	- 12 MT @ 16.2 g/t gold and 824 g/t silver				
Guadalupe Y Calvo	- 1.7 MT @ 36.7 g/t gold and 516 g/t silver				
Guanacevi	- 6.0 MT @ 5.3 g/t gold and 2,270 g/t silver				

Examples of some modern discoveries include:

Alamos Gold's	Mulatos deposit	- 43.5 MT @	1.58 g/t gold (	proven &	probable reserves)	**
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Glamis Gold El Sauzal - 20.5 MT @ 3.05 g/t gold (proven & probable reserves) \*\*

(\*\*) See page iv for data source

The Uruachic District of western Chihuahua State lies in the center of the Sierra Madre Occidental. Uruachic has been identified by geologists from Mexico's Consejo de Recursos Minerales, and other workers, as being on the flank of a major volcanic caldera. Also, the area lies directly on the northwest trend of several major known precious metals deposits. In common with most gold bearing calderas, radiating faults, concentric ring faults and, particularly, their junctions in the caldera, are favourable areas of mineralization (Source: with permission from Golden Goliath Resources, internal report by David St. Clair Dunn and Patricio Varas, April 1999).



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### **5.2 PROPERTY GEOLOGY AND MINERALIZATION**

**a.** The El Indio Property : El Indio is located near the contact, or transition zone, between the more recent Upper Volcanic Sequence and the older Lower Volcanic Sequence, where bi-modal volcanism changes from andesitic in the older units, to dacitic and rhyolitic in the younger. An altered (weakly silicified with disseminated pyrite) rhyolite crops out about 200 meters northeast of the claim monument and may be genetically associated with mineralized hydrothermal fluids.

The property is crossed by several large NNW fault systems that can reach up to 300 meters in width with intense fracturing. Additional thinner NNE fault zones are also present. The presently outlined zone of alteration reaches up to approximately 1,000 meters in strike length with over 200 meters wide. Mineralization appears to be epithermal as observed by the strong silicification and stockwork type quartz veining ( < 1mm up to 15 cm wide). Some of the quartz appears to be of chalcedonic type. Silicification is commonly accompanied by 2-5% disseminated fine to medium grained pyrite. Silicification is most intense where accompanied by closely spaced, NNW high angle fracturing. Micro-quartz veinlets with areas of hydrothermal breccias along fractures are suspected carriers of gold mineralization. Some of the higher grade samples collected to date appear to be related to a second stage silica event formed in a very fracture controlled host rock.

An area has been identified that has strong epithermal signatures, such as silicification, stockwork quartz veining and hydrothermal breccias that is approximately 1.5 km long by 250 meters wide and hosts gold and silver in grab and chip samples (See Map 1). This is a target area that requires significantly more exploration to determine the metal tenure of gold and silver.

The El Indio Property appears at this time to contain mostly gold, with low silver. Sampling to date has returned assays up to 10.46 g/t gold.

**b.** The Pelonachi Property : It lies within an erosional window which exposes the lower portions of the Upper Volcanic Sequence along the topographically highest edges of the property. Underlying this Upper Volcanic Sequence are andesitic tuffs and volcaniclastic sediments with an intercalated package of siltstones which outcrop in the river banks leading to the Oteros Creek.

The andesitic rocks appear to have been affected by an intrusive body dioritic to monzonitic, which is visible along creek streambeds. In the central northern portion of the property there is a structure that appears to be a rhyolite dome which also cuts the andesites. Rhyolite domes are often found within volcanic calderas.

Faulting at Pelonachi consists of three systems. First stage faulting which trends NNE, which is displaced by a second system that trends NW. The third system trends NE. Pelonachi hosts several geologic features such as, intrusive contacts with evidence of hydrothermal alteration; widespread quartz veinlets, alteration zones and tourmaline – rich breccias and stockwork zones with disseminated sulphides. Approximately one half of the Pelonachi concession is underlain by a granodioritic body which hosts a strongly altered zone of quartz-tourmaline-epidote-pyrite within a sparse network of quartz-hematite veinlets.

Another stockwork zone, identified as El Alicante has been brecciated and has traces of chalcopyrite,

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arsenopyrite, stibnite and strong quartz-pyrite alteration. These structures lie close to the intrusiveandesite contact. Fracturing and intense iron oxide alteration are also observed in this location.

The hill in the central area of the property, known locally as Cerro Pelonachi, is a color anomaly with quartz-pyrite alteration that extends from the top of the hill to the bottom of creeks. Samples of tournaline-rich breccia from this area run as high as 2.52 g/t gold. At an elevation of approximately 1,400 meters there is a band of argillic alteration which appears to be related to samples that have returned a gram or more of gold. Fracturing in this area has a preferred southeast orientation (Carlos Jurado & Paul Sorbara, 1996).

**c. The Delta 1 Property:** The northern 2/3 of the Delta 1 Property is underlain by lithic ignimbrites which are rhyolitic to dacitic in composition. The southern portion of the property is underlain by andesites and andesitic agglomerates which are unconformably overlain by the Upper Acid Volcanic Sequence.

In the central part of the property the rhyolites are silicified with zones of strong argillic and epidote alteration. Strongly to intensely argillized and fractured andesites have been observed in drill core beneath the altered rhyolites. Altered andesites have not been observed on surface. The altered rhyolites are cut by numerous fractures which contain veinlets of quartz and epidote. The fractures have a preferred orientation of 340 degrees with steep dips to the southwest. The altered zone does not form a conspicuous gossan and is very low in sulphide content. Hematite is often found along the selvadges of fractures. Fine specks of native gold have been observed along fractures in outcrops near the adit in the southeastern portion of the altered zone. Native gold has also been observed in polished thin sections taken from surface samples within the Delta 1 zone.

A fault has been mapped trending through the eastern portion of the altered zone. The fault trends northerly and dips steeply to the west. The size of the Delta 1 alteration zone is approximately 300 meters north-south by 200 meters east-west. This corresponds to the area of anomalous gold and silver from surface samples collected within the grid. The average gold assay from 142 surface samples collected from three different due diligence trips to the property was 4.32 g/t gold (Roy Woolverton, 1995).



MAP 5 : Regional Geology

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### 6.0 FIELD WORK AND RESULTS

At El Indio a total of 14 chip samples were collected. The writer visited the property in two consecutive days. Strong silicification with disseminated pyrite was seen extensively in outcrop, stockwork areas of narrow quartz veining (< 1mm up to 10 cm wide) and quartz flooded hydrothermal breccias with cockade textures were also observed. Outcrops with vuggy silica and chalcedonic quartz were also examined. In the center and northwestern area of the property an elongated limonitic area approximately 1.5 km long by 250 meters wide was readily visible. Samples taken in the central part by the writer returned anomalous gold values, and up to 4.19 g/t gold across 2 meters in an area of narrow quartz veining. Anomalous values of silver, arsenic, lead, antimony and mercury were also detected. Two contiguous samples taken from an old trench in an area of narrow quartz veins averaged 2.67 g/t across 4 meters. Rock alteration (silicification), stockwork quartz veining, vuggy textures, chalcedonic quartz, anomalous As, Sb and Hg, and samples with values above 1 g/t gold are all very strong indications that the El Indio Property may host epithermal precious metal mineralization. An exploration program is strongly recommended based on these positive results and the fact that the property lies within the central belt of the Sierra Madre. See Map 1 for sample locations at El Indio.

At the Pelonachi Property widespread hydrothermal alteration was observed over an area of at least 1 by 1 kms, characterized by strong limonitic staining. A total of 6 chip samples were collected. At the top of Cerro Pelonachi the rock was intensely fractured and silicified with disseminated pyrite. Also sericite was observed in the rock. The writer's first observation was an area of widespread phyllic alteration with a second hydrothermal phase in the form of quartz breccias and .stockwork silica veining formed along an earlier altered fractured rock. Large panel samples taken from this area gave disappointing gold values. It is possible the samples are high in the system and the fines collected mainly as weak limonite-silica remnant crusts in fractures were partially lost in the sampling process. I was also able to see in the rock, rare minute specks of chalcopyrite (traces) and a black disseminated mineral that may be tourmaline. Work done previously at Pelonachi mentions samples of tourmaline-rich breccia taken at a lower elevation that ran as high as 2.52 g/t gold. Also, at an elevation of approximately 1.400 meters a band of argillic alteration which appears to be related to samples that have returned a gram or more of gold are described (Carlos Jurado & Paul Sorbara, 1996). Based on the intensity and extent of rock alteration, weak anomalous Cu and Mo results, the presence of stockwork quartz veinlets and hydrothermal breccias, this property is requires an aggressive exploration program.

The Delta 1 Property is located in a hillside with steep topography. Three chip samples were collected. Sample 139994 taken across 2 meters in a breccia structure gave 1.2 g/t gold, and sample 139995 (5 x 5m panel) in a zone of narrow veinlets gave 4.48 g/t gold. The host rock is a weakly silicified and fractured ignimbrite, though because of a large vegetation cover a good view of the surface geology was not possible in this short visit. More work is required in this property in order to appreciate its full mineralization potential.

# 7. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PROGRAM

### 7.1 Sampling Collection Procedures

The sampling due diligence program consisted in taking chip channel or chip panel samples, as much as possible, perpendicular to the main veining and/or fracturing system observed on each property. Because of strong to intense fracturing, narrow quartz veining along fracture surfaces, and the powdery limonitic remnant material in fractures; it was decided to take larger (8-10 Kg) samples with care in collecting the fine fraction size material. The sample locations were recorded using a Garmin GPS 72 unit.

Each sample was taken under the supervision of the writer, a tag number was introduced in each sample bag which had previously been numbered with a permanent marker. The samples were double bagged and tied using plastic locking bag ties. At each sample location, orange flagging tape was left with the corresponding sample number. All samples were stored in a secure area in the writer's living quarters at Uruachic at the end of each day. Upon termination of field work, all samples were transported to the city Chihuahua, where they were put in labelled "rice" sacks by the writer and shipped by bus directly to the ALS-CHEMEX lab in Hermosillo.

As part of the author's QA/QC program, 2 duplicate samples, one blank and three standards were submitted with the batch of samples sent to ALS CHEMEX. The blank sample was of fragments of milky quartz provided by Daniel Noffrieta who had previously analyzed this sample which returned nil gold and silver. The three standards were provided by Geoquimica de Mexico, S.A., a private laboratory in the city of Chihuahua owned by Manuel Gomez who was former chief geochemist for Asarco for several years. Mr. Gomez is a highly regarded professional within the mining community in Chihuahua and has over 28 years experience working as a geochemist. This laboratory has recently acquired a Perkin Elmer 3000, ICP unit. It was indicated that the laboratory has applied for ISO 9000 Certification.

The first standard (numbered 139996) was commercially prepared by Western Analytical Labs of Salt Lake City, Utah by Ernie Phillips retired chief geochemist. Its code is GH-2. The other two standards were prepared by Geoquimica de Mexico (numbers 139998 and 139999).

The duplicate samples were a replication of specific channel chip sample lines. All attempts were made to take the same volume of rock from the same sample line as the previous sample. The results of the blank, standards, and duplicates are shown in the table below .

Sample No.	CHEMEX Result	Reference Value	CHEMEX Result	Reference Value	Description
	Au ppm	Au ppm	Ag ppm	Ag ppm	
87246	0.018	0.021	0.03	0.03	Duplicate of 87245
87249	3.3	4.19	5.8	3.8	Duplicate of 87247

# **TABLE 7.1**

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139997	0.006	nil	< 0.2	nil	Blank sample
139996	0.189	0.20	1.5	1.4	Standard (Code GH-2) **
139998	< 0.005	0.017	< 0.2	1.6	Standard 139998
139999	< 0.005	0.010	< 0.2	0.1	Standard 139999

\*\* Standard prepared commercially, as indicated previously.

Based on the results of the blank sample, standards, and duplicates inserted into the sample sequence, the author feels that the sample collection and analytical processes has been of acceptable industry standards. All of the results shown in Table 7.1 of the blank, standards and duplicates have yielded values within an acceptable difference of the respective reference material.

Gold metallic screening and Fire Assay AAS finish was done on 4 samples. See table below:

	Au-SCR-21	Au-AA24	
Sample No.	Au total ppm	F.A. ppm	Property
87238	< 0.05	< 0.05	Pelonachi
87246	< 0.05	0.018	EL Indio
87249	5.31	3.3	EL Indio
139995	4.89	4.48	Delta

The four samples collected from the properties were compared for the presence of coarse gold. Only sample 87249 taken from the EL Indio property had a significant gold increase with the metallic screening.

# 7.2 Analytical Procedures

All samples were submitted to ALS-CHEMEX in Hermosillo, Mexico where they were prepared and then the pulp was shipped directly by them to their main laboratory in Vancouver where they were analysed. ALS-CHEMEX is a Canadian-Australian based laboratory with an excellent international reputation. The author has used their preparation facilities in other countries on numerous occasions and has completed laboratory inspections of their preparation facilities (when they were previously owned by ITS-Bondar Clegg).

ALS-Chemex Analytical Procedures used are as follows:

### Au-AA24 – Precious Metal Analysis by Fire Assay and AAS

Sample was mixed with fluxing agents including lead oxide, and fused at high temperature. The lead oxide was reduced to lead, which collects the precious metals. The precious metals were

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### separated from the lead via cupellation. The precious metal content was determined by AAS.

Au-SCR21 – Precious Metal Analysis by Screen Fire Assay Selected samples were analyzed by screen fire assay to determine presence of coarse gold. A 1,000 g sample was used for screen fire assay analysis.

### ME-ICP41 – 34 Elements by Aqua Regia and ICP-AES

Sample pulps were treated by hot aqua regia acid digestion. Dissolved elements (34 elements) were analyzed by ICP-AES.



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### 8. CONCLUSIONS AND RECOMMENDATIONS

## 8.1 CONCLUSIONS

The El Indio Property contains strong silicification, stockwork zones with narrow quartz veining and quartz flooded hydrothermal breccias with cockade textures. Outcrops of vuggy silica and chalcedonic quartz are also present. In the center and northwestern area of the property an elongated limonitic area approximately 1.5 km long by 250 meters wide is readily visible. Samples taken in the central part of the property by the writer returned up to 4.19 g/t gold across 2 meters in an area of narrow quartz veining. Anomalous values of silver, arsenic, lead, antimony and mercury are found. Two contiguous samples taken from an old trench in an area of narrow quartz veins averaged 2.67 g/t across 4 meters.

Rock alteration (silicification), stockwork quartz veining, vuggy textures, chalcedonic quartz, anomalous As, Sb and Hg, and samples with values above 1 g/t gold are all very strong indications that the El Indio Property may host epithermal precious metal mineralization. An exploration program is strongly recommended based on these positive results and the fact that the property lies within the central belt of the Sierra Madre.

At the Pelonachi Property widespread hydrothermal alteration is present over an area of at least 1 by 1 kms, particularly strong limonitic staining. Phyllic alteration at Cerro Pelonachi with a second hydrothermal phase in the form of quartz breccias and .stockwork silica veining are widespread. Rare minute specks of chalcopyrite (traces) and a black disseminated mineral that may be tourmaline has been seen.

Work done previously at Pelonachi mentions samples of tourmaline-rich breccia that ran as high as 2.52 g/t gold. Based on the intensity and extent of rock alteration, weak anomalous Cu and Mo results, the presence of stockwork quartz veinlets and hydrothermal breccias, this property requires an aggressive exploration program.

The Delta 1 Property is located in a hillside with steep topography. Three chip samples were collected. Sample 139994 taken across 2 meters in a breccia structure gave 1.2 g/t gold, and sample 139995 (5 x 5m panel) in a zone of narrow veinlets gave 4.48 g/t gold. More work is required in this property in order to appreciate its full mineralization potential.

#### 8.2 **RECOMMENDATIONS**

The gold-silver Property should be evaluated for a large tonnage, low grade, bulk mineable goldsilver deposit, and for an underground vein-type gold-silver deposit. It is also recommended that open areas surrounding the El Indio Property be staked and registered to provide a more thorough land package.

An exploration program on all three properties is highly recommended as follows:

#### Phase I

- Regional compilation of district including Land Sat Imagery and Thematic Mapping
- geological mapping (1:1000), trenching, and geochemical multi-element sampling
- MMI geochemical sampling
- access road construction
- Property option payment and ongoing maintenance costs
- Staking

#### Phase II

- A second phase exploration program will depend on the first phase results. It would include; magnetics and IP/resistivity test lines to be determined from the initial work results.

-4,000 meters of diamond drilling on selected targets on each property, for a total of 12,000 meters.

- development of 500 meters in exploration tunnels at each property

#### **Diamond Drilling:**

A total of approximately 20 diamond drill holes per property, 200 meters deep (for a total of 4,000 meters/property) of NQ diameter should be drilled in selected areas based on surface geology and geophysical results. Each drill section should consist of two inclined drill holes

As part of the diamond drill program, and all of the future sampling programs it is recommended that a full quality assurance and quality control (QA/QC) program be implemented. The surface location of all drill holes should be permanently marked and surveyed, and down hole deviation tests be completed at regular intervals during the drilling process.

#### 9.0 PROPOSED BUDGET

#### Phase I (In US funds)

Initial Option Pay	ment:		\$25,000
Professional Staff:	1 project manager: 1 geologists:	\$300/day x 50 days \$200/day x 100 days	\$15,000 \$20,000
Driver	\$2,400		
Regional Compilati	on, Landsat Imagery &	<sup>z</sup> Thematic Mapping	\$10,000
Bulldozer (D-6): Pelonachi access El Indio access re	road = 100 hours oad = <u>200 hours</u> Total=300hours @ \$ 80	/hour	\$24,000
Bulldozer time cont	\$1,800		

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Analytical (rock/trenches):	250 samples @ \$20/sam	nple	\$5,000
MMI Geochemistry:	250 samples @ \$20/sar	nple	\$5,000
General Labour: 10 helpers	@ \$ 15/day x 120 days		\$18,000
Accommodation for Staff (H	Rent house in Uruachic)	\$ 250/month x 8 months	\$2000
Food for Staff : 3 people @	\$ 15/day x 120 days		\$5400
Transport, Equipment and	Fuel Expenses:		\$5,000
Staking/Registration of Cor	ncessions:		\$4,000
Miscellaneous(flights,etc.):			\$4,000

SUBTOTAL PHASE I = US 146,600

Contingency (10%)

14,600 PHASE I TOTAL = US \$ 161,200

## Phase II (In US funds)

Geophysics:	50 1'm - 1-m /	22 500						
Magnetics :	50 line km/property @ \$150/km x 3	22,500						
IP/resistivity:	50 line km/property @ \$1,500/km x 3	225,000						
Diamond Drilling (N	NQ size ): 12,000 meters @ \$100/meter	1,200,000						
Analytical (Drilling	Related): 9,000 samples @ \$20/sample	180,000						
Professional Staff:	1 project manager: \$300/day x 180 days	54,000						
	1 geologist: \$200/day x 180 days	36,000						
Driver	\$ 30/day x 180 days	5,400						
Bulldozer (D-6):								
Pelonachi access	road and drill pads $=$ 300 hours							
El Indio access ro	bad and drill pads = $250$ hours							
Delta I access roa Tota	ad and drill pads = $900 \text{ hours}$ 1 - 1.450  hours @ \$ $80/hours$	116,000						
100		110,000						
Analytical (rock/tre	nches): 400samples @\$20/sample	8,000						
General Labour: 20 helpers @ \$ 15/day x 180 days 54,								

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Exploration Tunnels 500 meters @ \$ 20	00/meter x 3	Properties	300,000
Accommodation for Staff (Rent house i	n Uruachic)	\$ 250/month x 6 months	1500
Food for Staff :6 people @ \$ 15/day x 1	180 days		16,200
Transportation, Equipment and Fuel l	Expenses:		70,000
Miscellaneous			30,000
		SUBTOTAL PHASE II =	= 2,318,600
Contingency (10%)		\$	231,860
	PHA	SE II TOTAL = US	52,550,460

## GRAND TOTAL (PHASE I AND II) = US \$ 2,711,660

Respectfully Submitted,

"Victor Jaramillo" signed

Victor A. Jaramillo, P.Geo September 19, 2003

#### **10. REFERENCES**

Cordova Hector, 2003, Minera Stingray, personal communications, data for El Indio, Pelonachi and Delta 1 Properties.

Delta 1, 2002, Direccion General de Minas, Titulo de Concesion Minera de Explotacion, No. 215571

El Indio, 1997, Direccion General de Minas, Titulo de Concesion Minera de Exploracion, No. 205852

Encyclopedia Britannica, 1998, Map of Mexico

Jurado Acuña Carlos & Sorbara J. Paul, 1996, Minera Delta S.A. de C.V- Internal Report., Report on the Pelonachi Property, Municipality of Uruachic, Chihuahua, Mexico

Lutynski Piotr, 2003, Golden Goliath Resources Ltd., Mineral Exploration in the Uruachi Area, Sierra Madre Occidental, Chihuahua, Mexico

Nofrietta Daniel, 2003, Personal Communication, the El Indio Property, the Pelonachi Property and the Delta 1 Property, Geology, logistics, various maps and previous work

Nofrietta Daniel, 1996, Minera Delta Internal Memo, El Indio Property

Pelonachi, 1997, Direccion General de Minas, Titulo de Concesion Minera de Exploracion, No. 215571

Reyes Manuel, 1996, Laboratorio de Mineralogia y Petrografia, estudio petrografico, Pelonachi Property, Sample 378063

Robinson Jim, 1999, International Northair Mines Ltd, Inernal Memo, El Indio Property

Rossotti Andrea et al, 2002, Revista Mexicana de Ciencias Geologicas, v. 19, num 1, p. 1-15, Geology of the boundary between the Sierra Madre Occidental and the Trans-Mexican Volcanic Belt in the Guadalajara region, western Mexico

Salas P. Guillermo, 1991, The Geological Society of America, Vol. P-3, Economic Geology, Mexico, Chapter 18, Sierra Madre Occidental Metallogenic Province

Sorbara J. Paul , 1999, Golden Goliath Resources Ltd, Summary Report on the El Indio Property-Internal Report, District of Uruachic, Chihuahua, Mexico

St Clair Dunn David & Varas J. Patricio, 1999, Golden Goliath Resources Ltd Internal Report, Report on the San Timoteo, Nueva Union, La Reforma, Corona, Oteros and El Chamizal Mineral

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Properties, State of Chihuahua, Mexico

Swanson E.R.& McDowell, 1984, Calderas of the Sierra Madre Occidental Volcanic Field, Western Mexico Journal of Geophysical Research, Vol. 89, No. B10, P 8787-8799

Telluris Consulting, 2000, Mexicana de Cobre S.A. internal Report, Structural and Remote Sensing Analysis of the Uruachic District, Chihuahua

Tindall Mark, 1994, for Bthlehem Resources Corporation, Levelland Energy and Resources Ltd. And Minera Delta S.A. de C.V. – Internal Report, 1994 Diamond Drilling Report on the Delta-1 Property, Chihuahua, Mexico

Torres E. Ivette, 2001, U.S. Geological Survey Mineral Yearbook, The Mineral Industry of Mexico

Woolverton Roy, 1995, Levelland Energy and Resources Ltd. – Internal Report, A Data Review of the Delta 1 Property, State of Chihuahua., Mexico

www.goldengoliath.com/chihuahua.html, 2003, Chihuahua State: New Discoveries and Past Producers

www.glamis.com/properties/mexico/elsauzal.html, 2003, El Sauzal Project, Mexico

www.miningrecord.com/company\_detail/index.asp?company=54, 2003, Minefinders Corporation Ltd., News Release: Interim Resource model of the Company's Dolores gold and silver Deposit in Chihuahua, Mexico

www.quepasa.com/mx/geo\_geo\_mx.htm, 2003, Geology of Mexico

www.investinmexico.com.mx/sectionGateway.jsp?cmd=show&sectionIdString=1.1..., 2003, Invest in Mexico, Mexico's Key Information

www.alamosgold.com/s/AboutMexico.asp?printVersion=now&\_Title=About Mexico, 2003, Alamos Gold Inc., About Mining in Mexico US Department of Commerce, 1998, Investment Climate in Mexico

www.cia.gov/cia/publications/factbook/print/mx.html, 2003, The CIA World Fact Book – Mexico

www.atlapedia.com/online/countries/mexico.htm, 1995, Mexico, Atlapedia Online

www.alamosgold.com, under Salamandra Property, Mexico, 2003

www.minefinders.com/News/april5,2002.html, Mexico, 2003, Dolores Property

www.glamis.com/properties/mexico/elsauzal.html, 2003, El SauzalProperty

Victor Jaramillo, P.Geo

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### **11. CERTIFICATE**

I, Victor A. Jaramillo of 603-1933 Robson Street, Vancouver, B.C. Canada, do hereby certify that:

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- I am consulting geologist with an office located at 603-1933 Robson Street, Vancouver, B.C. V6G 1E7
- 2. I am a graduate of Washington and Lee University of Lexington, Virginia (U.S.A.) with a Bachelor of Science (1981) Degree in Geology, and a graduate of McGill University of Montreal with a Master of Science Applied (1983) Degree in Mineral Exploration.
- 3. I have continuously practiced my profession as a geologist since 1981.
- 4. I am a professional geoscientist, registered with the Association of Professional Engineers and Geoscientists of British Columbia (License No. 19131)
- 5. I am a Fellow of the Geological Association of Canada (GAC), a member of the Society of Economic Geologists (SEG).
- 6. I have read the definition of the "Qualified Person" set out in National Instrument 43-101 ("NI -43-101") and certify that by reason of my education, affiliation with a professional association ( as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purpose of NI 43-101.
- 7. I have reviewed and worked in several similar style deposits, and through this, have gained the expertise to give a fair evaluation of the nature and distribution of the mineralization on these properties.
- 8. The information and data used in this report is based on a site visit that I made to the three properties in the Uruachic District discussed in this report between September 2 and 6, 2003, where a due diligence review and field work was completed by myself. Also, visits to Minera Uruachic's offices in Chihuahua, Mexico, from my previous experience working in Mexico, and from the references cited.
- 9. I have neither directly or indirectly received any interest in the property, nor do I beneficially own directly or indirectly, any securities of Stingray Resources Inc., or any affiliated company, nor do I expect to receive any in the future.
- 10. In my professional opinion, the properties discussed in this report are of potential merit and warrant further exploration, as recommended in this report.
- 11.Consent is hereby given to Stingray Resources Inc. to use this report in support of raising exploration financing, and to reference this report in any applicable disclosure document, provided that no portion be used out of context in such a manner as to convey a meaning which differs from that set out in the whole.

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- 12. As of the date of this report I am not aware of any material fact or material change that is not reflected in this report.
- 13. I have read National Instrument 43-101 and Form 43-101F1, and this technical report has been prepared in compliance with this Instrument and Form

"V. Jaramillo" signed

Victor A. Jaramillo, P. Geo September 19, 2003 Vancouver, Canada

Uruachic Area Geology Report September 19, 2003

# APPENDIX I

Photographs : Mineral Specimens, Trenches and Old Workings



**PLATE 1:** Hand specimen from the top of the Pelonachi Hill. It shows the intense fracturing of the rock along with limonite-quartz remnants on surface fractures.

Uruachic Area Geology Report September 19, 2003



**Plate 2 :** Hand specimen from the Pelonachi Property. It shows fractures with quartz filling, could be described as a crackle breccia,



**Plate 3 :** Hand specimen of a quartz-pyrite vein at El Indio Property. It is one of the veins taken in sample 87247 across 2 m with 4.19 g/t gold.



**Plate 4 :** Sample from El Indio showing a 1 cm quartz vein with a preferred N-S orientation.



**Plate 5:** Sample from El Indio Property. Fragment of hydrothermal quartz breccia with cockade texture.



**Plate 6:** Stockwork sample with low temperature quartz micro veinlets from EL Indio Property.



**Plate 7:** Sample from the Delta 1 Property. Taken from stockwork area with 1 mm wide quartz veins.

Uruachic Area Geology Report September 19, 2003



Plate 8 : Sample of Hydrothermal breccia from the Delta 1 Property.



**Plate 9:** Pieces of core from drilling done at Delta 1. It is the author's opinion that most of the thin and friable quartz (fines) in fractures were washed away by the drilling. Possible reason for low gold results.

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Plate 10 : Near the top of the Pelonachi Hill. Notice the strongly fractured rock.

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**Plate 11:** View looking ESE of Cerro Pelonachi in center of photo.

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**Plate 12:** View looking SW of the Upper massive volcanics, and far below the lower volcanics with a strong color anomaly. Photo taken south of the El Indio.

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**Plate 13: Silicified rock specimen with stockwork quartz veining from El Indio.** 

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**Plate 14 :** Parallel (N-S orientation) milky quartz veins south of the El Indio Property .

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Plate 15: Location of sample 87247 showing parallel N-S quartz veins.

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Plate 16: Sampling at El Indio Property.



Plate 17: Delta 1 Property. Abandoned drill core.

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Plate 18: Delta 1 Property drill core.

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Plate 19 : Delta 1 Property. Entrance to old shaft.

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**Plate 20:** Delta 1 Property. Entrance to old shaft. View of fracture filled quartz in massive volcanics.

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## **APPENDIX II**

# ANALYTICAL RESULTS AND SAMPLE DESCRIPTION

URUACHIC PROPERTY ANALYTICAL RESULTS AND SAMPLE DESCRIPTION										
Sample No.	Easting	Northing	Sample Type	Sample Width	Location	Au g/t	Ag g/t	Ba ppm	Cu ppm	Description
87238	766,552	3,083,669	Rock	10 x 3	Pelonachi	<0.005	0.4	80	58	Very fractured & silicified rock with diss.
87239	766,549	3,083,678	Rock	3.5	Pelonachi	<0.005	<0.2	70	6	Pyrite and sericite (Phyllic alteration ?) Hydrothermal breccia with silica & pyrite
87240	766,600	3,083,636	Chips Rock	5 x 5	Pelonachi	<0.005	0.2	110	4	in microfractues. Rock strongly silicified.
87241	766 573	3 083 624	Chips Rock	10	Pelonachi	<0.005	0.2	100	49	Stockwork zone with fracturing mainly 320
87241	766,573	3 083 620	Chips	2 2	Delenachi	<0.005	0.2	100	6	- 330 degrees.
07242	700,575	3,083,020	Chips	2 X 2	reionaciii	<0.005	0.2	170	0	pyrite veining.
87243	766,488	3,083,676	Rock Chips	2 x 2	Pelonachi	<0.005	0.5	120	7	Moderately silicified rock, somewhat argillic
87244	762,582	3,085,498	Rock Chips	6 x 1	Indio	0.02	0.3	680	2	Strongly silicified fractured rock with silica veining (1mm wide) trending N-S
87245	762,582	3,085,490	Rock Chips	6 x 1	Indio	0.021	0.3	310	3	Similar to previous sample
87246	762,582	3,085,490	Duplicate	6 x 1	Indio	0.018	0.3	330	3	Duplicate of previous sample
87247 87248	726,581 726,581	3,085,513 3,085,513	Rock <u>Chips</u> Rock	2.0 2.0	Indio Indio	4.19 1.15	3.8 1.1	130 90	10 3	Fractured silicified rock with N-S quartz veins (0.5 to 10 cm wide)Fe oxides & pyrite Similar and contiguous to previous sample
87249	726,581	3,085,513	Chips Duplicate	2.0	Indio	3.3	5.8	110	11	Duplicate of sample 87247

	1	1					1				
87250	762 557	3 085 510	Rock	2.0	Indio	0.037	0.6	90	4	Pornhyritic volcanic rock with light green	
07250	102,331	5,005,510	Chips	2.0	muio	0.037	0.0	90	<b>.</b>	phenos. Probably sericitic?	
87251	763,214	3,083,589	Rock Chins	3 x 3	Indio	0.019	<0.2	140	3	Sample of milky quartz veins N-S taken in southern area out side El Indio Property.	
			Cimps							southern area out state in maio rroperty)	
139987	763,147	3,084,500	Rock Chips	2.0	Indio	<0.005	0.2	50	3	Brecciated ignimbrite with cockade quartz textures surrounding lithic fragments	
139988	762,870	3,085,143	Rock Chips	4.0	Indio	0.088	0.5	230	3	Silicified rock with sections of hydrothermal breccias with cockade type textures	
139989	762,877	3,085,276	Rock Chips	5.0	Indio	0.007	<0.2	130	3	Similar to previous	
			-								
139990	762,862	3,085,300	Rock Chips	4.0	Indio	0.017	<0.2	60	2	Strongly silicified fractured rock with thin silica veining (stockwork type)	
120001	<b>F</b> (2,002	2 005 220		<b>a</b> .	<b>T</b> 11	0.000		0.0	4		
139991	/02,885	5,085,529	Rock Chips 3.0		Indio	Indio 0.008		80	1	Similar to previous	
139992	762,910	3,085,086	Rock Chips	2.0	Indio	0.01	<0.2	70	2	Ignimbrite cut by parallel quartz veinlets oriented N -S	
139993	763,236	3,076,791	Rock Chips	1 x 1	Delta 1	<0.005	<0.2	110	2	Similar to previous	
139994	763,197	3,076,671	Rock Chips	2.0	Delta 1	1.205	55.3	90	12	Hydrothermal breccia with quartz stringers aligned N-S	
139995	763,309	3,076,586	Rock	5 x 5	Delta 1	4.48	5.4	40	2	Inside old shaft : ignimbrite with selective	
			Chips		-					sampling of quartz veinlets in fractures.	
10000 5		<b> </b>				0.400		1.60			
139996			Standard (1)			0.189	1.5	160	88	Standard	
139997			Blank (2)			0.006	<0.2	<10	2	blank	

#### Uruachic Area Geological Report September 19, 2003

139998		Standard		< 0.005	<0.2	1290	11	standard
		(3)						
139999		Standard		< 0.005	< 0.2	1750	<1	standard
		(4)						

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## **APPENDIX III**

## ALS CHEMEX Analytical Certificates and Sample Preparation Procedure

	HE03035890 - Fina	lized						
CLIENT : "MINSTI - Mine	era Stingray S.A. De C	.V."						
# of SAMPLES : 4								
DATE RECEIVED : 2003	3-09-10							
PROJECT : " "								
CERTIFICATE								
COMMENTS :								
"Corrected copy for	97246 and							
87238	87240 anu 87249"							
PO NUMBER : " "	01210							
								Au-
	Au-SCR21	Au-SCR21	Au-SCR21	Au-SCR21	Au-SCR21	Au-SCR21	Au-AA25	AA25D
	Au Total (+)(-)	Au (+)			WT. + Frac	WT Frac		
SAMPLE	Combined	Fraction	Au (-) Fraction	Au (+) mg	Entire	Entire	Au	Au
DESCRIPTION	ppm	ppm	ppm	mg	g	g	ppm	ppm
87238	<0.05	<0.05	<0.05	<0.001	13.01	895	0.01	<0.01
87246	< 0.05	<0.05	<0.05	<0.001	7.43	891	0.02	0.02
87249	5.31	4.83	5.32	0.054	11.17	954	5.31	5.32
139995	4.89	233	4.45	0.412	1.77	911	4.49	4.4

HE03035891 - Finalized CLIENT : "MINSTI - Minera Stingray S.A. De C.V." # of SAMPLES : 27 DATE RECEIVED : 2003-09-10 PROJECT : " " CERTIFICATE COMMENTS : "Attn: Hector Cordova" PO NUMBER : " "

	Au-	ME-									
	AA24	ICP41									
SAMPLE	Au	Ag	AI	As	В	Ва	Be	Bi	Ca	Cd	Co
DESCRIPTION	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm
87238	<0.005	0.4	1.5	13	10	80	<0.5	<2	0.36	<0.5	7
87239	<0.005	<0.2	0.36	5	10	70	<0.5	<2	0.05	<0.5	1
87240	<0.005	0.2	1.8	8	<10	110	<0.5	<2	0.38	<0.5	8
87241	<0.005	0.2	1.38	9	10	100	<0.5	<2	0.45	<0.5	6
87242	0.005	0.2	0.74	5	10	170	<0.5	2	0.07	<0.5	1
87243	<0.005	0.5	1.14	11	10	120	<0.5	<2	0.14	<0.5	3
87244	0.02	0.3	0.44	34	<10	680	<0.5	<2	0.05	<0.5	1
87245	0.021	0.3	0.52	43	<10	310	<0.5	<2	0.03	<0.5	1
87246	0.018	0.3	0.53	39	<10	330	<0.5	<2	0.05	<0.5	2
87247	4.19	3.8	0.92	536	10	130	1.2	<2	0.01	4.1	22
87248	1.15	1.1	1.08	170	<10	90	0.8	<2	0.01	1.3	7
87249	3.3	5.8	0.87	555	10	110	1.5	<2	0.01	4	16
87250	0.037	0.6	0.72	100	<10	90	0.8	<2	0.08	<0.5	2
87251	0.019	<0.2	0.43	23	10	140	<0.5	<2	0.04	<0.5	2
139987	<0.005	0.2	1	7	<10	50	0.6	<2	0.41	<0.5	5
139988	0.088	0.5	0.3	136	<10	230	<0.5	<2	0.01	<0.5	1
139989	0.007	<0.2	0.59	26	<10	130	<0.5	<2	0.04	<0.5	1
139990	0.017	<0.2	0.58	30	<10	60	<0.5	2	0.03	<0.5	1
139991	0.008	<0.2	0.56	28	<10	80	<0.5	<2	0.05	<0.5	1
139992	0.01	<0.2	0.43	25	<10	70	<0.5	<2	0.02	<0.5	1
139993	<0.005	<0.2	0.4	17	<10	110	<0.5	<2	0.1	<0.5	1
#### Uruachic Area Geological Report September 19, 2003

139994	1.205	55.3	0.36	18	<10	90	1.5	<2	0.07	<0.5	1
139995	4.48	5.4	0.77	14	<10	40	1.3	<2	0.51	<0.5	1
139996	0.189	1.5	0.37	724	10	160	<0.5	7	0.02	3.1	6
139997	0.006	<0.2	0.02	2	<10	<10	<0.5	<2	0.1	<0.5	<1
139998	<0.005	<0.2	0.11	48	30	1290	0.5	<2	0.41	<0.5	27
139999	<0.005	<0.2	<0.01	<2	<10	1750	<0.5	<2	0.74	<0.5	<1

| ME-<br>ICP41 |
|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Cr           | Cu           | Fe           | Ga           | Hg           | К            | La           | Mg           | Mn           | Мо           | Na           | Ni           | Р            |
| ppm          | ppm          | %            | ppm          | ppm          | %            | ppm          | %            | ppm          | ppm          | %            | ppm          | ppm          |
| 42           | 58           | 3.53         | 10           | <1           | 0.29         | 10           | 0.67         | 89           | 2            | 0.14         | 11           | 610          |
| 17           | 6            | 4.09         | <10          | <1           | 0.25         | 10           | 0.03         | 11           | 6            | 0.04         | 1            | 590          |
| 34           | 4            | 3.68         | 10           | <1           | 0.39         | 10           | 1.11         | 241          | 4            | 0.13         | 10           | 750          |
| 33           | 49           | 4.55         | 10           | <1           | 0.46         | 10           | 0.7          | 114          | 4            | 0.16         | 10           | 570          |
| 21           | 6            | 7.08         | 10           | <1           | 0.29         | 10           | 0.14         | 23           | 1            | 0.1          | 2            | 410          |
| 23           | 7            | 4.92         | 10           | <1           | 0.39         | 10           | 0.43         | 40           | 1            | 0.1          | 4            | 600          |
| 62           | 2            | 1.14         | <10          | <1           | 0.18         | 20           | 0.03         | 178          | 1            | 0.02         | 2            | 320          |
| 40           | 3            | 1.26         | <10          | <1           | 0.17         | 10           | 0.04         | 131          | <1           | 0.01         | 1            | 420          |
| 80           | 3            | 1.34         | <10          | <1           | 0.2          | 20           | 0.05         | 141          | <1           | 0.02         | 3            | 390          |
| 29           | 10           | 9.26         | <10          | 4            | 0.14         | 20           | 0.04         | 59           | 3            | <0.01        | 5            | 160          |
| 29           | 3            | 3.33         | <10          | 2            | 0.22         | 30           | 0.05         | 35           | 1            | <0.01        | 2            | 170          |
| 31           | 11           | 10.75        | <10          | 4            | 0.14         | 20           | 0.03         | 81           | 2            | <0.01        | 4            | 160          |
| 43           | 4            | 1.58         | 10           | 10           | 0.36         | 10           | 0.11         | 35           | 1            | 0.01         | 2            | 150          |
| 50           | 3            | 1.07         | <10          | <1           | 0.17         | 10           | 0.09         | 107          | 1            | <0.01        | 2            | 200          |
| 72           | 3            | 1.24         | <10          | <1           | 0.16         | 20           | 0.31         | 216          | 1            | 0.03         | 6            | 230          |
| 55           | 3            | 1.54         | <10          | <1           | 0.14         | 10           | 0.02         | 34           | 30           | <0.01        | 2            | 60           |
| 62           | 3            | 1.23         | <10          | <1           | 0.22         | 10           | 0.04         | 209          | <1           | 0.02         | 2            | 440          |
| 34           | 2            | 1.37         | <10          | <1           | 0.2          | 10           | 0.04         | 139          | <1           | 0.02         | 1            | 520          |
| 40           | 1            | 1.43         | <10          | <1           | 0.27         | 20           | 0.04         | 239          | <1           | 0.01         | 1            | 410          |
| 47           | 2            | 0.84         | <10          | <1           | 0.18         | 10           | 0.05         | 80           | <1           | <0.01        | 2            | 160          |
| 54           | 2            | 2.01         | <10          | <1           | 0.23         | 10           | 0.04         | 137          | <1           | 0.01         | 1            | 190          |
| 63           | 12           | 1.01         | <10          | <1           | 0.16         | 10           | 0.06         | 171          | 1            | <0.01        | 2            | 60           |
| 54           | 2            | 1.57         | 10           | <1           | 0.16         | 20           | 0.13         | 347          | 1            | 0.04         | 2            | 110          |

Stingray Re	sources Inc.					Uruachic Septembe	Area Geolog er 19, 2003	gical Report				
31 95 10	88 2 11	2.06 0.16 >15.0	<10 <10 <10	2 <1 2	0.17 0.01 0.02	10 <10 <10	0.01 0.01 0.11	78 15 64	7 1 17	<0.01 <0.01 <0.01	29 3 196	570 30 160
1	<1	0.05	<10	<1	<0.01	<10	<0.01	26	<1	0.01	<1	<10
ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41	ME- ICP41		
Pb	S	Sb	Sc	Sr	Ti	TI	U	V	W	Zn		
ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm		
21	1.83	<2	3	74	0.06	<10	<10	46	<10	19		
28	0.34	<2	<1	64	0.02	<10	<10	10	<10	5		
26	2.08	<2	5	80	0.12	<10	<10	71	<10	34		
6	1.54	<2	3	80	0.05	<10	<10	53	<10	15		
6	0.8	<2	1	80	0.02	<10	<10	29	<10	6		
82	1.55	<2	2	87	0.05	<10	<10	28	<10	12		
19	0.14	<2	3	33	0.05	<10	<10	24	<10	18		
30	0.1	<2	3	22	0.04	<10	<10	29	<10	25		
30	0.14	2	3	23	0.05	<10	<10	30	<10	29		
116	0.05	75	2	17	0.01	<10	30	345	50	158		
26	0.01	24	2	25	0.01	<10	10	85	10	67		
98	0.08	86	2	14	0.01	<10	30	441	60	146		
16	0.05	7	3	23	0.01	<10	<10	32	<10	28		
11	0.01	5	1	17	0.02	<10	<10	16	<10	29		
28	<0.01	2	2	32	0.09	<10	<10	36	<10	44		
19	0.03	6	<1	8	<0.01	<10	<10	26	<10	17		
11	0.03	3	3	13	0.04	<10	<10	16	<10	29		
11	0.03	2	3	11	0.07	<10	<10	17	<10	21		
12	0.01	2	3	11	0.04	<10	<10	15	<10	33		
7	<0.01	<2	1	5	0.01	<10	<10	12	<10	25		
13	0.01	<2	2	25	0.01	<10	<10	3	<10	19		
25	0.01	<2	3	10	0.03	<10	<10	11	<10	66		
23	<0.01	9	5	16	0.05	<10	<10	21	<10	73		
42	1.13	31	1	51	<0.01	<10	<10	21	<10	28		
<2	<0.01	<2	<1	20	<0.01	<10	<10	1	<10	4		
48	0.05	<2	<1	94	<0.01	<10	<10	158	<10	131		

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4	0.09	<2	<1	633	<0.01	<10	<10	<1	<10	96

## ALS CHEMEX Sample Preparation Procedure

# ALS Chemex



#### Sample Preparation Procedure - CRU-31

#### Method: Crushing

The entire sample is passed through a primary crusher to yield a crushed product of which greater than 70% is less than approximately 2mm. A split (split size is determined by the final preparation method and analysis requested) is then taken using a stainless steel riffle splitter.

The crushing code indicates the weight of the original sample.

ALS Chemex <u>Code</u>	Rush <u>Code</u>	Parameter	Sample <u>Weight (Ib)</u>	Sample <u>Weight (kg)</u>
226	295	0-3 kg Crush and Split	0-6	0-3
294	272	4-7 kg Crush and Split	7 - 15	4 - 7
276	293	8-12 kg Crush and Split	16 - 25	8 - 12
273	271	13-18 kg Crush and Split	26 - 40	13 -18
270		19-26 kg Crush and Split	41 - 60	19 - 26
278		27-36 kg Crush and Split	61 -79	27 - 36

CRU-32 is used for crushing samples that may exhibit coarse gold effects. The sample is fine crushed to better than 90% -2mm.

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## ALS Chemex

# ALS

## Sample Preparation Procedure - Splitting

Method: Splitting

The entire sample is transferred to a tray and then repeatedly passed through a stainless steel riffle splitter until the required split size has been obtained. Sample reject is returned to its original package or, if necessary, to a more suitable container.

 Chemex
 Parameter

 Code
 Parameter

 234
 0-7 kg Sample Splitting

 260
 8-26 kg Sample Splitting

#### ALS Chemex

#### Sample Preparation Procedure - PUL-31

Method: Grinding

A crushed sample split (200 - 300 grams) is ground using a ring mill pulverizer with a chrome steel ring set. The ALS Chemex specification for this procedure is that greater than 85% of the ground material passes through a 75 micron (Tyler 200 mesh) screen. Grinding with chrome steel may impart trace amounts of iron and chromium into a sample.

ALS Chemex <u>Code</u>	Rush <u>Code</u>	Parameter
208	258	Assay Grade Ring Grind
205	255	Geochemical Ring Grind

Victor Jaramillo, P.Geo

Stingray Resources Inc.

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# APPENDIX IV

Analytical Results and Sample Description of work done by S. Brunelle and H. Cordova at the Property

Victor Jaramillo, P.Geo

## **DELTA 1 PROPERTY**

### Au Ag

Sample no.	ppm	ppm	Location	Comment
D001	1.48	26.3	7663,195E-3,076,665N	2 meter Panel Chip sample, quartz veinlets in silicified ignimbrite
D002	0.03	3.2	8 m, east of PPO	Grab sample, silicified ignimbrite
D004	2.06	1.2	Pit to underground	2 meter Panel Chip sample, silicified ignimbrite with epidote plus 1 to 2 mm thick quartz veinlets
D005	0.069	1.3	Pit to underground	2 meter Panel Chip sample, silicified ignimbrite with epidote plus 1 to 2 mm thick quartz veinlets
D006	0.017	<0.5	Pit to underground	2 meter Panel Chip sample, silicified ignimbrite with epidote plus 1 to 2 mm thick quartz veinlets
D007	0.007	< 0.5	Pit to underground	2 meter Panel Chip sample, silicified ignimbrite with epidote plus 1 to 2 mm thick quartz veinlets
D008	0.055	1.2	Underground work	7 meter Channel sample, silicified ignimbrite with low epidote
D009	0.062	< 0.5	Underground work	1 meter Channel sample, 0.40 m thick quartz vein
D010	0.265	0.6	Underground work	1 meter Channel sample, 0.60m thick quartz vein
D011	9.93	24.5	Underground work	Float sample, Au mineralization evidence at mouth of adit.
END				

Note: From D004 through D007, samples were taken in the wall located between the small pit and entrance to underground working.

## EL INDIO PROPERTY

#### Au Ag

Sample no.	ppm	ppm	Location	Comment
I001	3.44	4.1	762,587E-3,085,515 N	Pit: 1m channel sample, 3 to 10 cm thick qtz veinlets, brecciated tuff
I002	4.48	10.3	762,588E-3,085,515N	Pit: 1m channel sample, 3 to 10 cm thick qtz veinlets, brecciated tuff
I003	5.12	7.8	762,589E-3,085,515N	Pit: 1m channel sample, 3 to 10 cm thick qtz veinlets, brecciatef tuff
I004	1.99	2.4	762,590E-3,085,515N	1m panel chip sample, 3 to 10 cm thick qtz veinlets, brecciated tuff
I005	0.495	< 0.5	762,591E-3,085,515N	1m panel chip sample, 3 to 10 cm thick qtz veinlets, brecciated tuff
I006	0.081	1.7	762,586E-3,085,502N	1m panel chip sample, Brecciated tuff, strong silicification, quartz veinlets stockwork
I007	0.070	1.2	762,586E-3,085,501N	1m panel chip sample, Brecciated tuff, strong silicification, quartz veinlets stockwork
I008	0.599	4.7	762,586E-3,085,500N	1m panel chip sample, Brecciated tuff, strong silicification, quartz veinlets stockwork
I009	0.518	4.6	762,586E-3,085,499N	1m panel chip sample, Brecciated tuff, strong silicification, quartz veinlets stockwork
I010	0.021	<0.5	762,586E-3,085,498N	1m panel chip sample, Brecciated tuff, strong silicification, quartz veinlets stockwork
I011	0.028	< 0.5	762,586E-3,085,497N	1m panel chip sample, Brecciated tuff, strong silicification, quartz veinlets stockwork
I012	0.013	<0.5	762,586E-3,085,496N	1m panel chip sample, Brecciated tuff, strong silicification, quartz veinlets stockwork
I013	0.009	<0.5	762,586E,3,085,495N	1m panel chip sample, Brecciated tuff, strong silicification, quartz veinlets stockwork

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I014	0.016 <0.5	762,586E-3,085,494N	1m panel chip sample, Brecciated tuff, strong silicification, quartz veinlets stockwork
I015	0.287 1.1	10 metres west of I014	3m panel chip sample, Brecciated tuff, strong silicification, quartz veinlets stockwork
I016	0.012 <0.5	762,538E-3,085,512N	Grab sample
I017	0.032 <0.5	762,545E-3,085,488N	3m chip sample, low feox, low to moderate chlorite
I018	0.023 <0.5	762,547E-3,085,411N	Grab sample close to creek and old house
I019	0.060 < 0.5	762,907E-3,085,158N	0.25m sample, drussy quartz zone in a silicified tuff, 2% diss. pyrite
I020	$<\!\!0.005 <\!\!0.5$	3m east of I019	1m panel chip sample, drussy quartz zone, silicified tuff, 2% diss. Pyrite
I021	$<\!\!0.005 <\!\!0.5$	762,727E-3,085,330N	5m panel chip sample, low feox, chlorite and argillization in a tuff
I022	<0.005<0.5	762,593E-3,085,465N	2m panel chip sample, strong argilization, cocade structure in a silicified tuff
I023	0.007 <0.5	6m S85E from I022	3m panel chip sample, micro qtz veinlets, 3% diss. py in welded tuff
I024	0.049 0.8	762,566E-3,085,505N	5m panel chip sample, moderate feox +chlorite, low disseminated pyrite
I025	0.014 <0.5	762,517E-3,085,392N	2m panel chip sample, qtz veinlets with low feox in a silicified tuff, 1% diss. Py
I026	0.123 <0.5	762,656E-3,085,500N	4.5 m panel chip sample, 3mm thick qtz veinlets in a silicified tuff, fe ox in fract.
I027	$<\!0.005<\!0.5$	762,676E-3,085,525N	2.40m panel chip sample,1-5 mm thick qtz veinlets stockwork, silicified tuff
I028	0.009 <0.5	30m NE from I027	4m panel chip sample, 3mm thick gtz veinlets stockwork in a silicified tuff
I029	1.025 4.4	Close to creek	Float sample, breccia, strongly silicified, close to Ropariachic's old house
I030	2.53 12.9	Close to old house	Float sample, breccia, lower part of east slope of Ropariachic
I031	0.980 6.5	Close to PPO monument	Float sample, qtz veining, vuggy.
END			

## PELONACHI PROPERTY

## Au Ag

Sample no.	ppm	ppm	Location	Comment
P001	0.025	< 0.5	766,489E-3,083,776N	2 meter Panel Chip sample, Pelonachi Peak, chlorite+feox alteration in a brecciated tuff
P002	0.007	< 0.5	60m south of P001	3 meter Panel Chip sample, Chlorite+hematite in fractures+qtz veinlets in a brecciated tuff
P003	< 0.005	5<0.5	50m southwest of P002	2 meter Panel Chip sample, Chlorite+hematite in fractures+qtz veinlets in a brecciated tuff
P004	< 0.005	5<0.5	766,387E-3,083,772N	3 meter Panel Chip sample, andesitic porphyry, 3% oxid. py, qtz Micro veinlets
P005	0.007	0.9	766,420E-3,083,764N	2 meter Panel Chip sample, andesitic porphyry, 3% oxid, py,qtz Micro veinlets
P006	0.035	< 0.5	766,175E-3,083,703N	10 meter Channel Chip sample, Orange to brown color anomaly, andesite, low/mod silicif. hem stain/fract
P007	0.010	0.7	766,140E-3,083,588N	4 meter Channel Chip sample, andesitic porphyry low/moderate argilization, mod fe ox stain
P008 END	< 0.005	5<0.5	Close to P003	Grab sample